CLAIMS:

1. Recordable optical record carrier for recording information using a radiation beam having wavelength λ and incident on an entrance surface of the optical record carrier comprising, in this order:

- a protective layer facing the entrance surface,
- a first recording stack (L0), said recording stack comprising a recording layer of an organic dye material and a groove structure,
- a transparent spacer layer sandwiched between neighboring recording stacks, and
- a second recording stack (LN) comprising a recording layer,

wherein the groove depth of the recording layer of the first recording stack (L0) is in a range from $0.241*\lambda/n_S$ to $0.362*\lambda/n_S$, where n_S is a refractive index of a material in a land between grooves on the groove structure.

2. Record carrier according to claim 1, wherein the groove depth of the recording layer of the first recording stack (L0) is in a range from $0.289*\lambda/n_S$ to $0.337*\lambda/n_S$.

3. Record carrier according to claim 1, wherein the groove width of the recording layer of the first recording stack (L0) is in a range from $0.198*\lambda/NA$ to $0.397*\lambda/NA$, in particular in a range from $0.289*\lambda/NA$ to $0.347*\lambda/NA$, where NA is a numerical aperture of the radiation beam incident on the optical record carrier.

4. Record carrier according to claim 1, further comprising:

- at least one additional recording stack between the protective layer and the second recording stack (LN), said additional recording stack comprising a recording layer of an organic dye material and a groove structure and
- transparent spacer layers sandwiched between the neighboring recording stacks,

wherein the groove depth of the recording layer of at least one of said additional recording stacks is in a range from $0.241*\lambda/n_S$ to $0.362*\lambda/n_S$.

5. Record carrier according to claim 4, wherein the groove depth of the recording layer of at least one of said additional recording stacks is in a range from $0.289*\lambda/n_S$ to $0.337*\lambda/n_S$.

6. Record carrier according to claim 4, wherein the groove width of the recording layers of at least one of said additional recording stacks is in a range from $0.198*\lambda/NA$ to $0.397*\lambda/NA$, in particular in a range from $0.289*\lambda/NA$ to $0.347*\lambda/NA$.

7. Record carrier according to claim 1 or 4, wherein each recording stack further comprises a metal reflective or heat-sink layer arranged on the side of the recording layer facing away from the entrance surface.

8. Record carrier according to claim 7, wherein said metal reflective or heat-sink layers are substantially made of a material of the group consisting Ag, Al, Au or Cu.

9. Record carrier according to claim 7, wherein the thickness of said reflective or heat-sink layers is in a range below 40 nm, in particular below 25 nm.

10. Record carrier according to claim 1 or 4, wherein the thickness of the recording layer of at least one recording stack at a groove position is in a range from $0.168*\lambda/n_r$ to $0.336*\lambda/n_r$, in particular in a range from $0.235*\lambda/n_r$ to $0.302*\lambda/n_r$, where n_r is a refractive index of the recording layer.

11. Record carrier according to claim 1 or 4, wherein the recording layer of at least the first recording stack shows a leveling ratio in a range from 0.3 to 0.5, in particular in a range from 0.35 to 0.40, said leveling ratio being defined as the difference between the thickness of said recording layer at a groove position and the thickness of said recording layer at a land position normalized by the groove depth.